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IS 7511-8 (1986): Dimensions For Neck Finishes, Part 8: Vacuum lug finish [CHD 10: Glassware]

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(1990-02)

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Indian Standard

DIMENSIONS FOR NECK FINISHES

PART 8 VACUUM LUG FINISH

(First Revision)

(Incorporating Amendment No. 1)

Glass Containers Sectional Committee, MCPD 13 [Ref: Doc : MCPD 13 (605) (viii)]

1. Scope — Lays down the dimensions for vacuum lug finishes.

2. Dimensions

2.1 The dimensions of vacuum lug finishes shall be as given in Tables 1 to 3 and Fig. 1.

2.2 Sealing Surfaces — The sealing surface may be flat or radiused and shall conform to the dimensions given in Tables 1 to 3 and Fig. 1. The surface shall be as regular and smooth as possible.

EXPLANATORY NOTE

A variety of glass finishes are now being produced by the glass containers industry. Most of these finishes are being used by packers who have facilities for high speed filling and capping operations. Consequently it has become necessary to standardize upon the dimensions of different types of glass finishes.

This standard was first issued in 1974 titled 'Summary sheet on glass containers neck finishes'. As the standard mainly lays down the dimensions for various types of neck finishes for glass containers, the standard has been retitled as 'Dimensions for neck finishes'. Since its first issue, it was observed that a number of sizes recommended under the shallow continuous thread finish range were not in use. On the contrary, a number of sizes, not included in earlier issue were very popular with the industry. Also glass neck finishes not included in the first version were popular with the trade. In view of this, the revision of the standard became necessary.

The following are some of the changes made in this revision:

a) The sizes of various neck finishes not in use were deleted and the additional sizes included.
b) A new glass finish range, namely, shallow continuous deep thread finish, has been included.
c) Certain individual dimensions of glass neck finishes have been revised in view of the limitations posed by the glass container manufacturing processes.
d) Vacuum lug finishes which have recently become very popular with wide mouth glass containers have also been included in the present revision. These finishes are non-pilferproof.
e) The notations representing different glass finish dimensions have been changed to be in conformity with internationally accepted practices.
f) Tall continuous neck finish has been deleted as the same is no longer popular.

This standard is being issued in the following parts:

Part 1 Shallow continuous thread finish (R3);
Part 2 Shallow continuous deep thread finish for deep screw caps (R3/D);
Part 3 Roll-on threads non-pilferproof (RONPP);
Part 4 Roll-on threads pilferproof (ROSPP);
Part 5 Vial goldie seal glass finishes;
Part 6 Dual neck finish;
Part 7 Crown finish; and
Part 8 Vacuum lug finish.

While preparing this standard, assistance has been derived from the following:

ISO 8162-1985 Glass containers — Tall crown finishes — Dimensions, issued by International Organization for Standardization (ISO);
ISO 8163-1985 Glass containers — Shallow crown finishes — Dimensions, issued by International Organization for Standardization (ISO);
ISO/DP 9100 Glass containers — Vacuum lug finishes for wide mouth container — Dimensions, issued by International Organization for Standardization (ISO);
BS 1918 : Part 1 : 1978 Glass container finishes, Part 1 Specification for continuous thread finish, issued by British Standards Institution (BSD; and
BS 1918 : Part 2 : 1981 Glass container finishes, Part 2 Specification for crown finish, issued by British Standards Institution (BSD.

This edition 2.1 incorporates Amendment No. 1 (February 1990). Side bar indicates modification of the text as the result of incorporation of the amendment.

Adopted 20 January 1986	© BIS 2003	**Price Group 2**

BUREAU OF INDIAN STANDARDS
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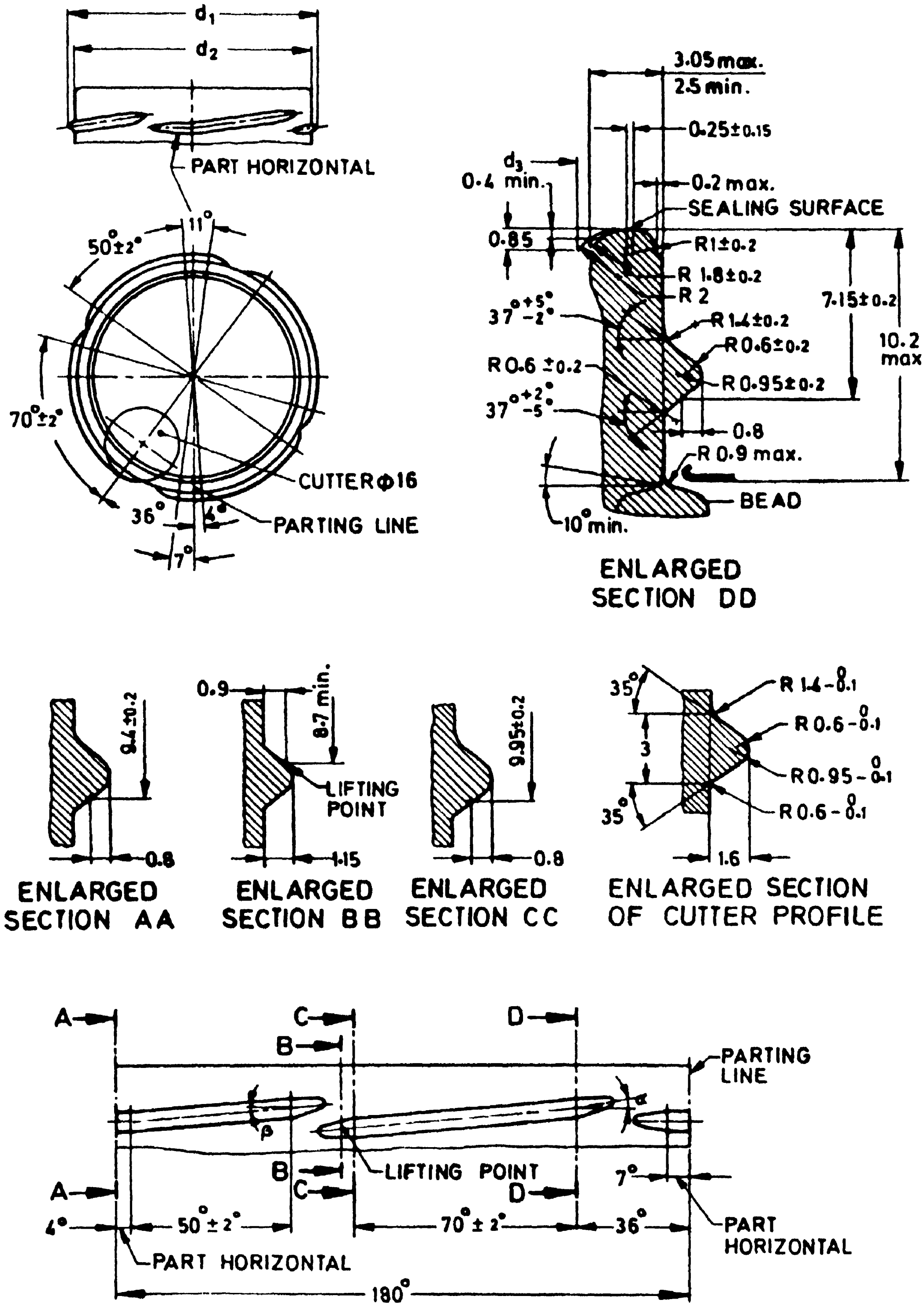
TABLE 1 DIMENSIONS FOR VACUUM LUG FINISH SIZE 53 and 58

(*Clauses* 2.1 *and* 2.2)



All dimensions in millimetres.

Nominal Diameter	d_1	d_2	d_3 *Min*	Pitch (Thread of 25.4 mm)	Thread Helix Angle β	Angle of Fixture to Cutter α
53	51.95 ± 0.40	48.80 ± 0.40	42.25	1 3/4	5°14'	10°
58	55.85 ± 0.40	52.70 ± 0.40	46.15	1 3/4	4°52'	10°

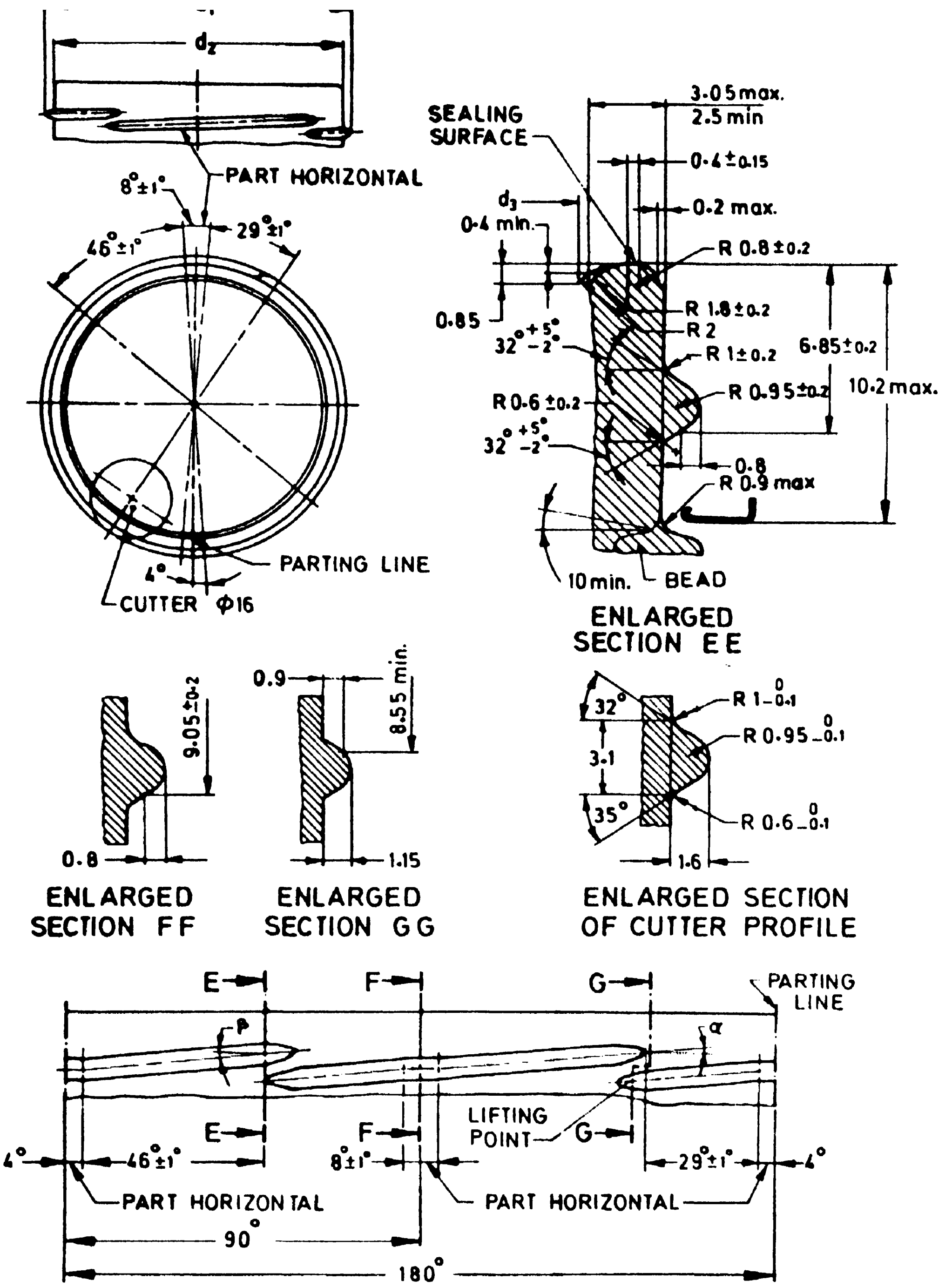
Note 1 — Any form of bead may be used provided sufficient clearance is allowed.

Note 2 — The sealing surface should be free from crizzles and depressions which could effect sealing efficiency. If the minimum value is used, care must be taken that the top of the finish has a minimum flat of 0.10 mm. The whole container must be free from cracks likely to have an adverse effect on sealing performance.

Note 3 — The diameters d_1 and d_2 should be concentric. The mean value for all dimensions should be aimed at; ovality should be kept to a minimum.

TABLE 2 DIMENSIONS FOR VACUUM LUG FINISH SIZES 63, 66, 70 and 77

(*Clauses* 2.1 *and* 2.2)



All dimensions in millimetres.

Nominal Diameter	d_1	d_2	d_3 *Min*	Pitch (Thread of 25.4 mm)	Thread Helix Angle β	Angle of Fixture to Cutter, α
63	62.05 ± 0.45	58.90 ± 0.45	52.35	1 1/2	5°05'	5°05'
66	64.95 ± 0.45	61.80 ± 0.45	55.25	1 1/2	4°52'	4°52'
70	68.95 ± 0.45	65.80 ± 0.45	59.25	1 1/2	4°34'	4°34'
77	75.65 ± 0.45	72.50 ± 0.45	65.95	1 1/2	4°10'	4°10'

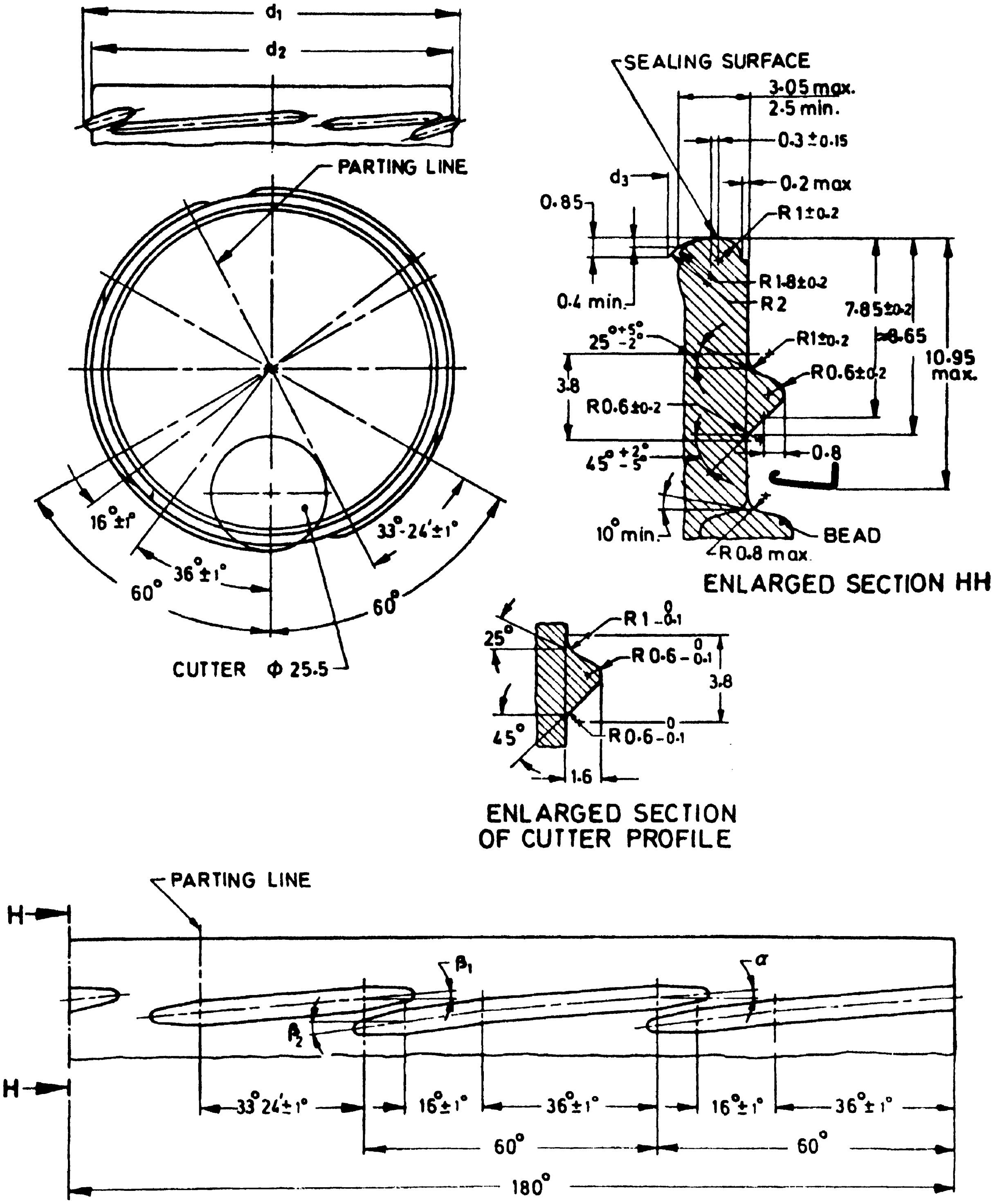
Note 1 — Any form of bead may be used provided sufficient clearance is allowed.

Note 2 — The sealing surface should be free from crizzles and depressions which could effect sealing efficiency. If the minimum value is used, care must be taken that the top of the finish has a minimum flat of 0.10 mm. The whole container must be free from cracks likely to have an adverse effect on sealing performance.

Note 3 — The diameters d_1 and d_2 should be concentric. The mean value for all dimensions should be aimed at; ovality should be kept to a minimum.

TABLE 3 DIMENSIONS FOR VACUUM LUG FINISH SIZE 82

(*Clauses* 2.1 *and* 2.2)



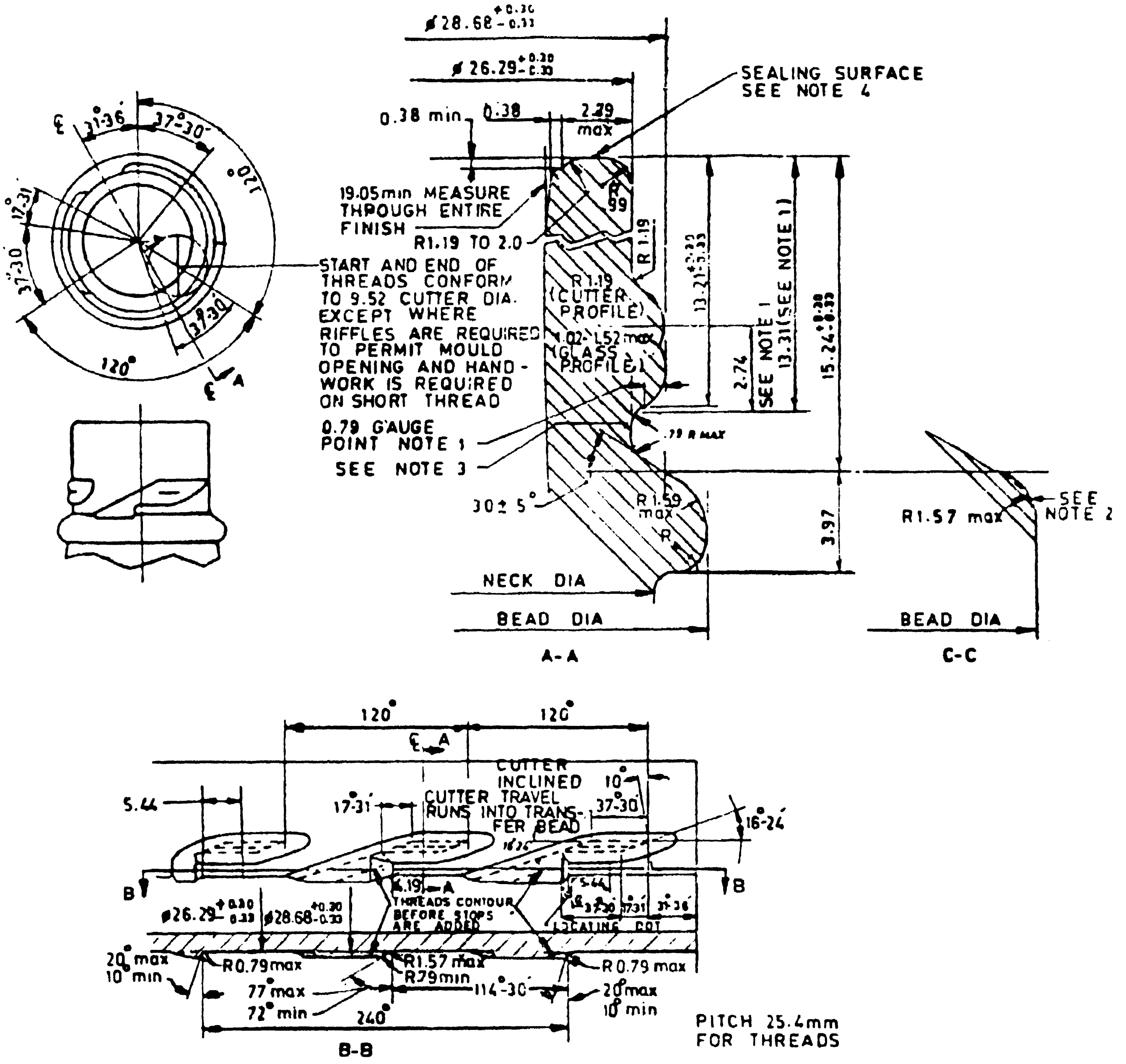
All dimensions in millimetres.

Nominal Diameter	d_1	d_2	d_3	Pitch (Thread of 25.4 mm)	Thread Helix Angle		Angle of Fixture to Cutter
					β_1	β_2	
82	80.75 ± 0.45	77.80 ± 0.45	71.05	For β_1 = 1 1/4 For β_2 = 3/4	4°40'	7°55'	4°40'

Note 1 — Any form of bead may be used provided sufficient clearance is allowed.

Note 2 — The sealing surface should be free from crizzles and depressions which could effect sealing efficiency. If the minimum value is used, care must be taken that the top of the finish has a minimum flat of 0.10 mm. The whole container must be free from cracks likely to have an adverse effect on sealing performance.

Note 3 — The diameters d_1 and d_2 should be concentric. The mean value for all dimensions should be aimed at; ovality should be kept to a minimum.



NOTES

1. The 2.74 distance is not critical for cap function but is suggested for mold maker's guidance. The 13.31 distance is the thread root depth to provide 13.21 depth at page line.

2. Locating dot remains visible after cap application showing position of stop dot should not violate 15.24 mm depth or head diameter.

3. 'E' diameter must be maintained down to fillet at transfer bead.

4. Sealing surface must be smooth and free of defects that would prevent a vacuum seal being made or interfere with rotation of closure.

5. Maintain 'T' diameter to a depth of 13.6 from 13.6 to 15.24 diameter may be less than minimum but not greater than maximum.

All dimensions in millimetres.

FIG. 1 DIMENSIONS FOR GLASS NECK FINISH FOR ϕ 30 LUG CAP